Amendments in the claims:

1. (currently amended) An apparatus for characterizing optical properties of a sample, comprising:

a) a light source for generating a broadband beam;

b) at least a first set of components defining a first light path, said components including at least a first component pair of a first planar mirror and a first parabolic mirror with a first focal length and a second component pair of a second planar mirror and a second parabolic mirror with a second focal length,

wherein said broadband beam illuminates said first planar mirror and said first parabolic mirror in said first component pair and said second planar mirror and said second parabolic mirror in said second component pair at angles substantially near normal to said first planar mirror and said first parabolic mirror in said first component pair and said second planar mirror and said second parabolic mirror in said second component pair;

wherein said first set of components is disposed between said source and said sample on said first light path; and

c) an element onto which said broadband beam is illuminated, wherein said broadband beam illuminates said element at angles substantially near normal to said element.

2. (currently amended) The apparatus of claim 1 wherein said first planar mirror and said first parabolic mirror in said first component pair are positioned such that said broadband beam exiting said first component pair is collimated.

3. (currently amended) The apparatus of claim 1 wherein said second planar mirror and said second parabolic mirror in said second component pair are positioned such that said broadband beam entering said second component pair is collimated.

4. (currently amended) The apparatus of claim 1 wherein said first planar mirror and said first parabolic mirror in said first component pair each has a UV-enhancing aluminum coating.

5. (currently amended) The apparatus of claim 1 wherein said second planar mirror and said second parabolic mirror in said second component pair each has a UV-enhancing aluminum coating.

6. (currently amended) The apparatus of claim 1 wherein said first focal length of said first parabolic mirror in said first component pair is different than said second focal length of said second parabolic mirror in said second component pair.

7. (original) The apparatus of claim 1 wherein said first set of components further comprises a polarizing means.

8. (original) The apparatus of claim 7 wherein said polarizing means polarizes said broadband beam in one of two orthogonal directions.

9. (original) The apparatus of claim 7 wherein said polarizing means further comprises a rotatable polarization analyzer.

10. (original) The apparatus of claim 1 wherein said element is selected from the group consisting of a sample and a first detector.

11. (original) The apparatus of claim 10 further comprising a polarizing means in said first detector.

12. (original) The apparatus of claim 11 wherein said polarizing means further comprises a rotatable polarization analyzer.

13. (original) The apparatus of claim 10 wherein said first detector is a spectroscopic ellipsometer.

14. (currently amended) The apparatus of claim 1 wherein said broadband beam has wavelengths lying in a range between 190 and 1100 nm inclusive.

15. (original) The apparatus of claim 1 wherein said broadband beam has a diameter of greater than 500 μm at said light source

and a diameter lying in a range between 50 and 80 μm when illuminated onto a top surface of said sample.

16. (currently amended) The apparatus of claim 1 further comprising a means of mechanically displacing said second component pair ~~while maintaining~~ without altering a ~~relative~~ position of said second parabolic mirror relative to ~~and~~ said second planar mirror, ~~such that distance from said parabolic mirror and a top surface of said sample is such that said broadband beam is focused~~ whereby a focus position of said broadband beam can be altered without moving said first component pair.

17. (original) The apparatus of claim 1 further comprising a second set of components defining a second light path, wherein said element is a first detector.

18. (original) The apparatus of claim 1 further comprising a third set of components defining a third light path.

19. (currently amended) The apparatus of claim 18

wherein said third light path includes at least a third component pair of a third planar mirror and a third parabolic mirror with a third focal length and a fourth component pair of a fourth planar mirror and a fourth parabolic mirror with a fourth focal length;

wherein said third and fourth focal lengths differ from said first and second focal lengths.

~~wherein said first focal length of said parabolic mirror in said first component pair in said third light path and said second focal length of said parabolic mirror in said second component pair in said third light path are different than said first focal length of said parabolic mirror in said first component pair in said first light path and said second focal length of said parabolic mirror in said second component pair in said first light path.~~

20. (original) The apparatus of claim 18 wherein said element is a first detector.

21. (original) The apparatus of claim 18 wherein said element is a second detector.

22. (original) The apparatus of claim 21 further comprising a polarizing means in said second detector.

23. (original) The apparatus of claim 22 wherein said polarizing means further comprises a rotatable polarization analyzer.

24. (original) The apparatus of claim 21 wherein said second detector is a spectroscopic ellipsometer.

25. (original) The apparatus of claim 18 further comprising a fiber for redirecting said broadband beam.

26. (currently amended) A method of characterizing optical properties of a sample, the method comprising ~~the steps of~~:

a) providing a sample to be characterized;

b) generating light in a broadband beam;

c) ~~magnifying and illuminating~~ providing said broadband beam ~~onto~~ to a top surface of said sample with ~~in~~ a first set of reflective components defining a first light path, wherein said first set of components includes at least a first component pair of a first planar mirror and a first parabolic mirror with a first focal length and a second component pair of a second planar mirror and a second parabolic mirror with a second focal length, and wherein changes in polarization of said broadband beam are minimized by ensuring that said broadband beam illuminates said reflective components in said first light path and said sample at angles substantially near normal to said reflective components and said sample;

d) ~~magnifying and illuminating~~ receiving ~~said~~ a broadband response beam ~~reflected~~ from said ~~top surface of said~~ sample at ~~to~~ a first detector with ~~in~~ a second set of reflective components defining a second light path, wherein changes in polarization of said broadband beam are minimized by ensuring that said broadband beam illuminates said reflective components in said second light path and said sample at angles substantially near normal to said reflective components and said sample;

e) measuring an intensity of said broadband response beam ~~reflected~~ from ~~said top surface of~~ said sample with said first detector; and

f) determining optical properties of said sample based on said measured intensity ~~of said broadband beam reflected from said top surface of said sample~~.

27. (currently amended) The method of claim 26 further comprising ~~the step of~~ polarizing said broadband beam in said first light path in one of two orthogonal directions.

28. (currently amended) The method of claim 26 further comprising ~~the step of~~ focusing said broadband beam illuminating said top surface of said sample in said first light path.

29. (currently amended) The method of claim 26 further comprising ~~the step of~~ focusing said broadband response beam ~~reflected~~ from said ~~top surface of said~~ sample in said second light path.

30. (currently amended) The method of claim 26 further comprising ~~the step of~~ adjusting polarization of said broadband response beam ~~reflected~~ from said ~~top surface of said~~ sample in said second light path.

31. (currently amended) The method of claim 26 wherein said broadband beam has wavelengths lying in a range between 190 and 1100 nm inclusive.

32. (previously presented) The method of claim 26 wherein said response beam is emitted from said sample by reflection of said broadband beam from said top surface of said sample, and further comprising ~~the steps~~:

g) transmitting ~~magnifying and illuminating~~ said broadband beam ~~from a bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample~~ through said sample, to a second detector in a third set of reflective components defining a third light path, wherein changes in polarization of said transmitted broadband beam are minimized by ensuring that said transmitted broadband beam illuminates said reflective components in said third light path and said sample at angles substantially near normal to said reflective components and said sample;

h) measuring an intensity of said transmitted broadband beam ~~from said bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample through said sample,~~ with said second detector; and

i) determining optical properties of said sample based on said intensity of said transmitted broadband beam ~~from said bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample through said sample~~.

33. (currently amended) The method of claim 26 wherein said response beam is emitted from a bottom surface of said sample by

transmission of said broadband beam through said sample. ~~further comprising the steps:~~

~~g) magnifying and illuminating said broadband beam from a bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample through said sample, to said first detector in a third set of reflective components defining a third light path, wherein changes in polarization of said broadband beam are minimized by ensuring that said broadband beam illuminates said reflective components in said third light path and said sample at angles substantially near normal to said reflective components and said sample;~~

~~h) measuring an intensity of said broadband beam from said bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample through said sample, with said first detector; and~~

~~i) determining optical properties of said sample based on said intensity of said broadband beam from said bottom surface of said sample, after transmission of said broadband beam from said top surface of said sample through said sample.~~

34. (currently amended) The method of claim 33 ~~26~~ further comprising ~~the step of~~ focusing said ~~broadband~~ response beam from said bottom surface of said sample in said second ~~third~~ light path~~, after transmission of said broadband beam from said top surface of said sample through said sample~~.